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ABSTRACT

This is a pilot study which addresses whether teachers should be taught about visual literacy. A preliminary review of the literature revealed that: (1) prospective teachers need training in the skills and knowledge related to visual literacy if they are to develop such skills and knowledge in their students, and (2) visual literacy is not a common topic in teacher training. Then, a survey was conducted to provide information for further research. The findings indicated that visual literacy as a specific content area is not valued or included in teacher training programs. The respondents rated visual literacy very high, and felt that all aspects of it were of equal and high importance for preparing teachers to be effective in the classroom. Three figures illustrate categories of instructional activities for visual literacy, responses to the query regarding teaching of visual literacy in teacher education programs, and occurrences of a specific visual literacy course versus an integrated approach respectively. (Contains 16 references.) (DGM)

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# Visual Literacy: What do Prospective Teachers Need to Know?

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## Introduction / Statement of the Problem

The authors of this research have, together and separately, been involved in efforts over the last few years to integrate instructional technology into programs of undergraduate teacher education. Having both come from backgrounds that included training in visual literacy, we agreed that any instructional technology training should include some attention to the topic. Our own experience working with teacher training programs brought us to the conclusion that visual literacy as a concept is not widely understood or valued in such programs, even though there may be implicit references to the ideas of visual literacy embedded in the curriculum.

Our notions were informally supported by an anecdote that appeared in the April, 1994 issue of the *Visual Literacy Review* . Rhonda Robinson described an incident that occurred in her graduate level visual literacy course. As she was introducing the topic of the day, film genres and film language, one of her students spoke up to ask, "...why would anyone want to know this material? What use is any of this?" (p. 2) Robinson goes on to relate her response, and makes a telling observation about those who were most resistant to the topic:

> In fact, the group I most wanted to reach, the classroom teachers, were the least persuaded. They really just could not see what knowing about production techniques, or film language, or media and culture could possibly have to do with them and their classes. (p. 2)

What do prospective teachers need to know about visual literacy? Perhaps one must start with a logically prior question: why do teachers need to know anything at all about visual literacy?

Interestingly, it was a link between education and children's visual experience that, according to Debes, (in Sinatra, 1986), led to the founding of the visual literacy movement: "The Visual Literacy movement sprang up because observant educators and scholars were puzzled by changes they saw in young children after television had arrived in the average United States home. The I.Q. scores of school-entering children were rising sharply; but the numbers of students having difficulty learning to read and write were increasing. Contradictory seeming facts such as these and the classroom observations led to the First national Conference on Visual Literacy". (p. vii)

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This question is partly one of awareness and partly one of semantics. Some educators, like those in Robinson's graduate class, are simply unaware of the issues involved in visual communication. Others, in our experience and our conversations with those we surveyed for this study, may actually be teaching skills and knowledge related to visual literacy without having the specific terminology to describe it. Many professors of education, for example, require students to construct posters, bulletin boards, games, or other instructional media, though they may never have heard the term "visual literacy".

That teachers need to have considerable knowledge and skills in visual communication is supported by a large body of literature, which is detailed in the next section of this paper. A search of several databases, including ERIC, PSYCHLIT and Dissertation Abstracts, was conducted initially using a variety of descriptors, including "visual literacy" and "teacher education". This search unearthed a wide range of skills considered to be critical to good teaching and learning, but only a few articles even specifically mentioned that teachers might need special training to implement the suggestions. And of the few articles that acknowledged the need for teacher training, there were generally two approaches. One approach was that the authors dismissed the issue with broad statements to the effect that yes, teachers need to be trained, without looking at the deeper question of where and how that should be done. A second approach was to suggest methods (some very specific) for training practicing teachers through in-service workshops.

Additional evidence for the absence of teacher training as a topic in the visual literacy literature comes from Walker (1992). Walker, in trying to organize the diverse concepts included under the umbrella term of visual literacy, did so in two ways. First, she listed the structure of the table of contents from IVLA books of readings from 1982 to 1991. She further illustrated that information with a concept map. Nowhere in Walker's summary of topics was there any reference to teacher training, although there were numerous references to education, including the following descriptors: visualization in education, enhancing human potential through education, schooling, curriculum and instruction, visual literacy and education, and schools and curriculum.

On the possibility that visual literacy might be more of a practical reality than the subject of academic articles, an informal survey was conducted of college catalogs for institutions of higher education nation wide. A random sampling from 16 states and 21 institutions with teacher training programs revealed that none had a specific course in visual literacy listed in their undergraduate or certification offerings. Although most of the institutions had some requirement for art ( primarily in elementary education), only one institution offered a course directly related to visual literacy: visual thinking and visual images. This course was not a requirement, but was a possible elective for prospective teachers.

The issue of where or when such training should occur was not one we chose to address in this pilot study. It was the general belief of the authors that the only way to systematically guarantee the addressing of visual literacy training for teachers is at the pre-service level, which is generally the baccalaureate level. From this research, it appears that alternative training

approaches may be due some consideration, and some discussion of that question is provided in the last section of this paper.

Two things seemed apparent to us in our initial investigation. First, the number and variety of references to visual literacy in education clearly established that teachers should have these skills. Second, the lack of information about how teachers were being trained or should be trained indicated that more research was needed. In order to gather more systematic information about the status of visual literacy in training programs for prospective teachers, the following study was designed and implemented.

As a starting point it was decided to conduct a pilot study in which we would survey instructional technology faculty at a number of institutions around the country. We selected instructional technology faculty because we felt they were the most likely to have an understanding of visual literacy as a field and thus able to evaluate the status of their programs. The content of the survey was to address the current state of each institution's programs in relation to five basic questions:

1. what, if anything, is being taught about visual literacy in your teacher education programs?
2. in what course or context are visual literacy concepts being taught?
3. what is the best delivery format for visual literacy instruction?
4. what content related to visual literacy is most important for prospective teachers to know?
5. what is the awareness level of your students and faculty about visual literacy?

## Review of the Literature

Much has been written about the historical difficulty of defining visual literacy as a field and thus as a recognized movement. Seels (in Moore and Dwyer, 1994), acknowledges this challenge:

> It wasn't until the 1950's and 1960's , when television seemed to be influencing behavior and knowledge, that the concept of visual literacy caught the attention of educators. This interest was dispersed among leaders in many areas of education. As a movement, visual literacy has had relatively little impact on schools because, as with any new field, it has been building a theoretical and political base (p. 97).

Some would argue that the ability to communicate visually is a natural thing. Seels make a case for the necessity for visual literacy training in general. She quotes Hewes (1978) on the development of visual systems in our culture. "Hewes grants that people of normal vision who experience the concrete world develop similar visual abilities, but he argues that this fact does not make visual literacy superfluous. The "visual literacy is a general human condition" position is not sufficient because there are cross-cultural and technological phenomena to be taken into account." (p. 99)

Seels, further quoting Hewes, points out the effects of technology on increasing our need for visual literacy skills, and how visual literacy skills are not to be equated to verbal skills.

> ...for most of us, our visual outputs are not naturally comparable to

> our reading and writing skills because we do not have artistic or drawing talent. This equation changes with the development of photography because photography empowers people visually. With computer graphics, digitized photography, and interactive video, we have tools that raise the ability to visualize to new planes. Using today's technology, researchers can electronically unwrap 3,000-year old mummies, and consumers can turn their *Macs* and *PCs* into electronic darkrooms using photo CD images." (p. 99.)

A wide body of literature addresses the many applications of visual literacy skills and knowledge in improving the teaching and learning process. Examples of the wide range of applications include knowledge mapping as a learning strategy (McCagg and Dansereau, 1991), diagrams as a way of illustrating sequential and hierarchical relationships in social science texts (Guri-Rozenblit, 1988), designing visual analogies for instruction (Smith, P. and Ragan, T., 1992), and design and evaluation of text illustrations (Duchastel, P. and Waller, R., 1979; Holliday, W., 1990).

Suhor and Little (1988) present a "general model for a semiotic theory...as a way of depicting relationships among not only linguistic signs and visual signs, but other signs and sign systems in educational contexts." (p. 469). Sinatra (1986) extensively discusses the relationship of visual literacy to the reading and writing process. Clarke (1991) argues for the use of visual organizers such as time lines, Venn diagrams, inductive towers, concepts maps, causal chains, force fields, and flow charts in teaching reading across all subject areas.

Media literacy is another area of visual literacy which could be of potentially strong impact on young learners. Buckle and Kelley (1990) developed a program they designed to increase comprehension of television viewing of 12-13 year olds. The link between visual literacy and computers has been described by many writers, including using the visual capacity of computers as a tool for teaching visual skills (Ragan & Rezabek, 1987).

Most recently, Moore and Dwyer (1994) in their comprehensive new book *Visual Literacy: A Spectrum of Visual Learning*, brought together a number of contributors who discussed the many aspects of visual literacy in detail. Of these many contributors, Fredette's chapter on Use of Visuals in schools (Curriculum and Instruction) comes closest to addressing the issue of what prospective teachers should know. Indeed, the chapter, and the book as a whole would make an excellent textbook for a visual literacy course. However, Fredette, like all other sources we reviewed, concentrates on the content of visual literacy rather than the training required to teach the implementation of visual literacy in the public school classroom.

This leaves us with an interesting question. If such a clear case for accessing and developing visual skills in the teaching-learning process has been established, where and how are teachers expected to acquire these skills and knowledge? One might logically argue that if we assume teachers come equipped with such skills and knowledge, why would we then assume students do not?

The result of the review of the literature was to reinforce the notion that:

a) prospective teachers need training in the skills and knowledge related to visual literacy if they are to develop such skills and knowledge in their students.

b) inferring from the lack of data and from personal experience, the conclusion can be drawn that visual literacy is not a common topic of conversation at the level of teacher training.

## Methodology

This project was envisioned as a pilot study. Since no specific information was available concerning the prevalence of visual literacy as a topic addressed in teacher training, we determined to begin an investigation of this topic by surveying a number of colleagues, professors in the field of instructional technology. An initial list of contacts based on personal connections was compiled. Also, in some cases, respondents were asked for further possible contacts. The goal was not to conduct an inclusive survey of all teacher training programs, but to gather a clearer picture of the status of visual literacy in teacher training programs, in order to determine what further study might be called for.

The Survey instrument was developed to provide information for the research and clarification of specific research questions. A starting place was a column in the *Visual Literacy Review*, April 1994, titled "The Short Form", Visual Literacy in General Education: Definition. This article offered a definition of three specific abilities associated with visual literacy, specifically as visual literacy may impact higher education activities. The three abilities were given were: to visualize internally, to create visual images, and to read visual images.

Using these categories as a base, we translated the three categories in terms of instructional activities, based on a broad list of topics generated in our search of the ERIC database. The purpose was to define more specifically visual literacy skills and knowledge in terms of what teachers need to know or be able to do to integrate visual literacy into their teaching, in order to im-

- **Visual perception and visual learning processes**
  *(visual thinking, visualization, perceptual theories such as dual coding, visual symbolism, and visual learning styles)*

- **Creating visual images**
  *(design and production of visual materials in a variety of media, proper use of visual communication elements)*

- **Evaluation of visual messages**
  *(informed interpretation of visual media, including mass media, proper selection and use of ready-made visual instructional materials)*

Figure One: Categories of instructional activities for visual literacy

prove the teaching / learning process. We also wanted to express visual literacy concepts in language that avoided jargon. Therefore, under each category heading, several examples of instructionally related activities or concepts were listed to illustrate and clarify the main point. See Figure One.

We also determined to create an instrument which would give us the information we were looking for without overburdening the respondents. The goal was to survey a relatively small number of people but to have a high response rate. As a further way of ensuring a high response rate, it was decided to conduct the survey by telephone. A copy of the survey form is included at the end of this paper.

The surveys were conducted over a period of three weeks. Each of the authors did one initial survey as a formative evaluation to determine any changes or clarification which might be needed. The only changes made after this initial testing were format changes to make the response choices clearer to record. A total of eight surveys were conducted in this pilot study.

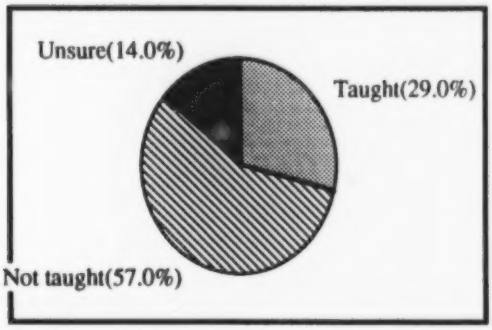


Figure Two: Responses to query regarding teaching of visual literacy in teacher education program.

## Results

Figure Two shows the respondents' overall perceptions regarding the presence of visual literacy as a concept within programs of teacher education. Survey responses indicated that visual literacy is addressed as a concept in only 29% of the institutions. Figure Three reflects respondents' opinions of the ways in which visual literacy is being addressed. In 14% of the institutions, visual literacy is offered as a specific course. In 86% of the institutions, visual literacy was seen as integrated, to a gréater or lesser extent, into the content of other education courses, particularly in methods or materials development courses.

On the question of what should be included in a visual literacy curriculum (see Figure One), all three categories were deemed important. Average responses were over 4.0 on a five-point scale for all three categories.

Respondents were unanimous in their opinions of the most appropriate form for

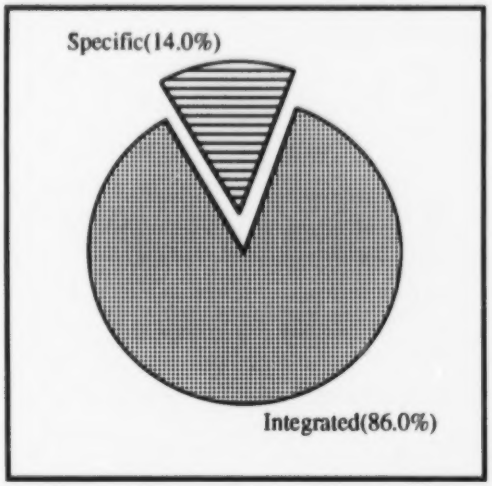


Figure Three: Occurence of specific course vs. integrated approach.

offering visual literacy content within teacher education programs. Every respondent rated integration into instructional technology courses as the best approach. Overall, the second choice was integrating visual literacy content into other teaching methods courses, and the final choice was to create a specific course. Regarding the phrase, "instructional technology courses", several respondents pointed out that instructional technology courses are sometimes viewed as being only for computer literacy, but the intention of the question refers to courses which address a wide range of technology related instructional skills and knowledge.

It was the respondents' opinion that the general awareness level about the need for visual literacy was low. On a scale of 1-5, with one being no awareness and five being high awareness, respondents marked both faculty and students at just over 2.

In order to determine whether our original assumption about the link between instructional technology and visual literacy was accurate, we also asked respondents to rate the degree to which visual literacy was emphasized in their own training. No conclusive pattern was found. On a scale of 1-5, with one being not at all, and five being highly emphasized, the average response was 3.0. The responses ranged from one to five.

## Conclusions / Recommendations

Our initial findings indicate that visual literacy as a specific content area is not valued or specifically included in teacher training programs, although it may be integrated in other ways, under other guises. Survey respondents rated visual literacy very high, and felt all aspects of visual literacy were of equal and high importance for preparing teachers to be effective in the classroom. Respondents also indicated a disappointingly low level of awareness among faculty and students about the importance of visual literacy as a subject of study.

Open ended responses indicate a possible problem in the operational definitions of visual literacy and instructional technology by people outside those fields. A difficulty in perceiving broader concepts than computer skills and bulletin boards limits study and development of more important visually-related communications skills.

Obviously, more study is needed to determine if the patterns we have identified are generalizable to teacher preparation nation wide. Continued research will follow this pilot, but other research from other perspectives can also illuminate the issues. For example, in-service and graduate programs may contain visual literacy study. If such programs exist, are they effective and do they represent the most appropriate place to deliver visual literacy concepts?

On a practical level, for those who work in institutions that offer teacher training, look for ways to introduce the terminology of visual literacy as a means of connecting to what other faculty may be doing. Since integration into methods courses seems to be one possible avenue for delivering visual literacy concepts, each of us needs to assist in the development of this integration, particularly in activities such as production of instructional materials and media. A strong argument for the integration approach comes from evidence provided by our respondents. State certification requirements for teacher training programs leave little room for new curricular

offerings, and have even resulted recently in the deletion of visual literacy related courses such as media design and even computer literacy in some institutions.

Those interested in the field of visual literacy, and certainly all members of IVLA, are well aware of the challenges we continue to face in making others aware of first, the concepts of visual literacy and second, the terminology of visual literacy. Change as a process must begin with awareness. Once people understand that visual communication and visual messages dominate our lives, they soon come to realize that such a powerful mode of communication should not be left to chance, nor should it be reasonably assumed that all people come naturally equipped with the kind of visual communication skills which are necessary for functioning in today's world. Just as public education teachers are routinely required to have training in public speaking, so their ability to communicate visually should be honed through training.

And just as in so many other areas of our society, changes will not come about without the work of strong advocates. Our future actions can be shaped partly through the results of this study: we cannot take for granted that people either understand or practice these things we recognize to be important. Education of teachers in visual literacy must begin in programs of education. Education of our colleagues in teacher education programs must begin with us.

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